Product Data Sheet

Seplife® AG MOC/90

1. Description

Seplife® AG MOC/90 is a agarose resin that combines both size-exclusion and binding properties thanks to the octylamine group.

- The multimodal functional group combines hydrophobic interaction (octyl group) and IEX interaction (primary amine).
- The agarose resin ensures very high flow rates (up to 1000 cm/h).
- High stability to CIP (cleaning in place) up to 1M NaOH.
- Regulatory Support File (RSF) is available for Seplife® AG MOC/90.

Seplife® AG MOC/90 is a multi-modal size exclusion and weak base anion chromatographic resin based on highly cross-linked agarose (6%) and has a particle size in the range 45-165 micron.

2. Properties

Product	Seplife® AG MOC/90
Appearance	White to off white spherical beads
Type	Size exclusion and octylamine agarose
Matrix	Highly cross-linked 6% agarose
Ion exchange capacity (mmol/ml)	0.04-0.085
pH ligand fully charged	Positively charged at pH<10.5
Particle size range (µm)	45-165
pH stability	3-13 (operational), 2-14 (CIP)
Chemical Stability	Stable in common aqueous solutions: 1M NaOH, 1M acetic acid. AVOID the use of Oxidizing agents, citrate buffers
Flow rate* (cm/h)	max 1000cm/h
10% Dynamic binding capacity (mg /ml)**	≥15(BSA)
Shipped as	20% ethanol slurry

*Testing conditions: Chromatography column 16mm×200mm; column bed height 20cm; temperature 25°C; mobile phase water.

** Testing conditions: Binding buffer: Tris-HCl pH 8.0；Elution buffer：Tris-HCl +1.0M NaCl, pH 8.0. Sample : bovine serum albumin, Column 8mm*100mm, room temperature, Retention time 2 minutes.

3. Instructions

3.1 Column packing

Column packing should be done according to standard operating procedures. It is important to ensure that each material is at its working temperature, and when possible, the chromatography media may be degassed before column packing.

3.2 Equilibration

Equilibrate the column with an appropriate 2-5 column volume buffer. Ensure the conductivity and pH of the effluent are the same as the equilibration buffer. The equilibration solution can be the buffer system used in conventional gel filtration and ion exchange chromatography, such as phosphate buffer and Tris buffer. It is recommended to avoid the use of acetate buffer systems, which reduce the adsorption capacity of the chromatography media.

3.3 Sample feeding

Typically, the target molecules follow the flow-through mode, and the impurities are adsorbed in the internal pores. The actual sample volume can reach 5-20 column volumes, mainly depending on the composition of the sample.

3.4 Rinse and regeneration

Rinse the column with equilibration buffer. The bound impurities can be removed by cleaning-in-place (CIP).

3.5 Cleaning-in-place (CIP)

To remove adsorbed contaminants and maintain product performance, periodic cleaning-in-place is required.

It is recommended, after each cycle, to rinse with 30% isopropanol solution containing 1.0 M NaOH or back rinse with 27% acetone solution. The contact time is 30-60 minutes, and the media can be temporarily stored in the solution for 15-30 minutes to improve cleaning efficiency.

The concentration of NaOH, the type of organic solvent, the contact time and the volume of CIP can all be optimized according to the actual sample.

3.6 Disinfection

0.5-1.0M NaOH solution can be used to pass through the column, and the contact time is 1h to sterilize the used chromatography column.

4. Storage

Sealed and stored at 4-30°C (preservation solution 20% ethanol), in a ventilated, dry and clean place. Do not freeze.

5. Transportation

Avoid sunlight, rain, and heavy pressure during transportation. It is strictly forbidden to transport with toxic and hazardous materials.

6. Precautions

6.1 Column selection: By increasing the column length, the resolution is improved but the flow rate may need to be slowed down and the peaks become broader. As the diameter increases, the inhomogeneity of liquid flow increases and the resolution decreases significantly. Optimization of the chromatographic parameters need to be achieved for best performance.

6.2 During the purification process, the sample and the chromatography media must be thoroughly equilibrated with equilibration buffer before column chromatography can be performed.

6.3 Column loading: The loaded column bed must have a flat surface, with no channel flow or air bubbles, otherwise it should be reloaded.

6.4 During sample loading and the entire elution process, prevent the column surface from drying out.

7. Ordering information

Product Name	References	Pack Size
Seplife® AG MOC/90	A5090502	25ml
	A5090503	100ml
	A5090504	500ml
	A5090505	1L
	A5090506	5L
	A5090507	10L

Production date: See label

Expiry date: 5 years, under proper storage conditions

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